BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769.	Rulemaking 14-08-013 (Filed August 14, 2014
And Related Matters	Application 15-07-002 Application 15-07-003 Application 15-07-005 Application 15-07-006 Application 15-07-007 Application 15-07-008

RESPONSE OF THE CALIFORNIA ENERGY STORAGE ALLIANCE TO THE CONSOLIDATED DISTRIBUTION RESOURCE PLAN APPLICATIONS OF THE INVESTOR OWNED UTILITIES

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RESPONSE OF THE CALIFORNIA ENERGY STORAGE ALLIANCE TO THE CONSOLIDATED DISTRIBUTION RESOURCE PLAN APPLICATIONS OF THE INVESTOR OWNED UTILITIES

The California Energy Storage Alliance ("CESA")[1] hereby submits this response pursuant to the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission") in response to the consolidated Distribution Resource Plan Applications

[1] 1 Energy Systems Inc., Abengoa, Advanced Microgrid Solutions, AES Energy Storage, Aquion Energy, ARES North America, Brookfield, Chargepoint, Clean Energy Systems, CODA Energy, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, Duke Energy, Dynapower Company, LLC, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, ELSYS Inc., Energy Storage Systems, Inc., Enersys, EnerVault Corporation, Enphase ENERGY, EV Grid, Flextronics, GE Energy Storage, Green Charge Networks, Greensmith Energy, Gridtential Energy, Inc., Hitachi Chemical Co., Ice Energy, IMERGY Power Systems, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, K&L Gates, LG Chem Power, Inc., LightSail Energy, Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Manatt, Phelps & Phillips, LLP, Mitsubishi Corporation (Americas), Mobile Solar, NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, Powertree Services Inc., Primus Power Corporation, Princeton Power Systems, Recurrent Energy, Renewable Energy Systems Americas Inc., Rosendin Electric, S&C Electric Company, Saft America Inc., Sharp Electronics Corporation, Skylar Capital Management, SolarCity, Sony Corporation of America, Sovereign Energy, STEM, SunEdison, SunPower, Toshiba International Corporation, Trimark Associates, Inc., Tri-Technic, Wellhead Electric. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (http://storagealliance.org).

("Applications") submitted pursuant to the *Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769 – Distribution Resource Planning*, issued February 6, 2015 ("ACR").[2]

I. INTRODUCTION.

CESA applauds the Commission and the utilities for their significant efforts in developing the Applications and advancing the Distributed Resource Plan ("DRP") framework. The DRPs constitute a major step towards more open and transparent electric distribution system planning. These efforts have already begun to inform and enable more responsiveness and selectivity in the deployment of Distributed Energy Resources ("DERs").[3] The Available Capacity Analysis efforts alone provide a very useful glimpse into where DERs can more readily and usefully be deployed. In this response, CESA recommends further actions that should help expand the Commission's "plug and play" concept and promote distribution system planning and operations that more fully leverage DERs to provide safe, reliable, and affordable electric service.

II. THE DISRIBUTION RESOURCE PLANS ARE A SOUND STARTING POINT BUT MUCH FURTHER WORK IS REQUIRED.

The DRPs represent a major advance in transparency for distribution system operations. The Integration Capacity Analysis and the Optimal Locational Analysis provide useful information and herald advances towards more integrated planning and full valuation of DERs. CESA expects this work will continue to provide value because, as discussed in many of the

[2] This response is timely filed by virtue of the *Administrative Law Judge's Ruling 1) Consolidating Proceedings; Setting Prehearing Conference, and Granting Motion for Extension of Time*, issued July 27, 2015.

[3] Based on participation in SCE's Webinar on its DRP, and participation in More Than Smart working groups, CESA believes some parties are already seeking to use the ICA and related maps to inform deployment strategies.

Applications, the distribution system operators indicate they will repeat and integrate these types of analysis into their future distribution system planning, potentially even annually.

CESA nevertheless believes further advances are possible through the DRPs. While the DRPs provided in the Applications provide helpful information, several of the Applications note that this information is subject to change and, to some degree, cannot be reliably used for DER planning purposes. Because of the transient nature of some important information, the DRPs may not adequately promote fast-tracked interconnection processes or long-term DER investment signals. The DRPs also lack new tariffs designed to leverage and compensate DERs for distribution system functions (*e.g.*, voltage support).

II. DISTRIBUTION RESOURCE PLANS SHOULD BE MORE ACTIONABLE.

DER providers, seeking to deploy and interconnect in support of either customer or distribution system functions, will benefit from more certainty regarding future grid conditions, rather than transient backwards looking "snap-shots" provided in the DRPs Each of the Applications explicitly note that the ICAs findings can change, potentially at any time, making the Integration Capacity Analysis ("ICA") difficult to plan toward. This transience can impede efforts to advance fast-track, or plug and play, interconnections and related DER deployments.

CESA recommends the DRPs and utility distribution planning should occur with more definition such that DRPs can provide useful and durable information, potentially reflective of distribution feeder "switching". More sophisticated DRPs that provide certainty concerning forward system needs should be a goal of the DRPs.

Distribution system feeder switching seems to be the primary driver of uncertainty in the determining future needs and available capacity on the distribution system or on specific feeders. CESA recommends further DRP work specifically designed to manage and reduce this element of uncertainty. Available distribution feeder capacity and optimal values analyses for DERs

should reflect anticipations of switching plans. For instance, distribution feeders with low likelihood of using switching solutions should be highlighted, thus boosting the certainty provided in the ICAs.

Ultimately, a highly actionable DRP will include multiple data points and regulatory aspects that promote DER usage and deployment in concert with distribution system planning and operations. CESA recommends the DRPs be upgraded to provide the following:

1. Avenues to faster interconnection processes in areas with known available capacity, in conjunction with Rule 21 rules and enhancements.

2. More durable information and data on distribution system challenges so that DER deployments can act on the information to provide and receive value, potentially for years into the future.

3. A basis for customer decisions (*e.g.* demand charge price signals, and incentives) regarding how or whether to pursue on-premise DER solutions.

4. Standard contracts or tariff designs or compensation mechanisms that facilitate plug and play DER applications and DER solutions that help resolve known and identified distribution system challenges outside of utility requests for offers ("RFOs").

In addition to these DRP functionalities, utilities should still pursue additional distribution system solutions via RFOs or other procurement and planning approaches. CESA also supports these approaches for cases where DER solutions are not otherwise addressing utility needs, but recommends distribution planning processes prioritize DER solutions within reason. CESA recognizes that, at times, other circumstances may require utility-directed actions in addition to DRP-driven actions.

III. REVIEW AND APPROVAL OF DISTRIBUTION RESOURCE PLANS SHOULD BE CLOSELY COORDINATED WITH OTHER ACTIVE COMMISSION PROCEEDINGS.

As many stakeholders have noted, the traditional functional dividing lines of the grid are becoming indistinct. Customers can and do provide generation. Distribution operations can leverage behind-the-meter resources or third party solutions. Multi-function resources are

becoming more feasible. Overall, these changes require more integrated cross-functional approaches to the development of rules, broader expertise and understanding among stakeholders, and new approaches to grid planning, operations, and compensation.

The structure for regulatory proceedings faces similar challenges. Regulatory proceedings are likely requiring new and higher levels of coordination. Approaches for separating and scoping rulemakings are incredibly important in this regard. With this challenge in mind, CESA believes that the DRPs, the new Integrated Demand Side Resources ("IDSR"),[4] and the Distributed Generation[5] and Storage Interconnection ("Rule 21") proceedings all need especially careful coordination.

As discussed, DRP information, where appropriate, should inform and further the fast-track and other interconnection processes developed in the Rule 21 proceeding. Rule 21 efforts meanwhile should reflect new and changing roles for customer-side resources being developed in the IDSR proceeding. Lastly, IDSR pathways, valuations, and related rules should synchronize with and provide value to distribution system planning efforts directed through the DRPs.

A key goal of this coordination is to ensure maximum value to ratepayers by enabling a wide variety of solutions and approaches while providing safe and reliable electric service while facilitating the state's greenhouse gas reduction goals. To do this, not only must the DRPs promote and integrate DERs into the utility-driven planning and operations, but also customer-driven actions should work in concern with utility needs and processes.

[4] R.14-10-003.
[5] R. 11-09-011.

IV. FURTHER CONSIDERATION OF ENERGY STORAGE AND THE WIDE VARIETY OF DISTRIBUTED ENERGY RESOURCE SOLUTIONS SHOULD BE INCLUDED IN THE DISTRIBUTION RESOURCE PLANS' ANALYSES.

CESA notes that the ICA and LNBM methodology of the IOUS likely contains assumptions that may understate or negatively value energy storage and or other DER solutions. As the DRPs may end up impacting rule development not only in Distribution Planning, but also in interconnection, tariff design, and future utility procurement, CESA believes further consideration on the roles and plausible deployment scenarios for energy storage and DER solutions is warranted and important. To this end, CESA also recommends that ICAs show feeders with headroom for DER generation or load-reduction capacity, and vice versa, signaling likely locational roles for storage and DER solutions, *e.g.* upstream vs downstream of the feeder's congestion.

Several points from the DRPs highlight where energy storage and DER solutions are perhaps inaccurately or under-accounted for. In SCE's DRP, the LNBM assumes the penetration of storage will mirror that of PV based on the assumption that only customers pairing PV with storage would adopt it. In the ICAs, energy storage played a small or negligible role. It appears that SCE and SDG&E did not include consideration of energy storage in their ICAs, as represented in the DRPs, and PG&E included storage in a fairly limited manner, capping storage procurement based on established procurement targets. Where storage was represented, the multiple grid benefits of storage and the beneficial roles on the distribution system are not effectively factored in. These effects compound when the DER growth scenarios are developed because these scenarios are based on the results of the ICA and LNBM. Ultimately, with less storage in the growth scenarios, downstream planning efforts may inadvertently omit needed planning and approaches for DERs.

V. RULES FOR DISTRIBUTED ENERGY RESOURCE AGGREGATION SHOULD BE CONSIDERED IN THE DISTRIBUTION RESOURCE PLANS.

While some of the work should occur in the IDSR proceeding, DER aggregation warrants consideration in the DRPs as well. Portfolios of DERs may prove optimal in addressing system needs and thus should be factored into distribution planning. However, aggregations can present unique circumstances insofar as they involve resources interconnecting at various points, creating different power flows than from a single source DER. Some work on Demand Response programs has already sought to address these challenges, but CESA recommends the DRPs address them as well. Rules for dealing with aggregations that involve sources of power at various points changing in complicated ways should be included in the DERs.

VI. COMPENSATION MECHANISMS CONSIDERED IN DISTRIBUTED RESOURCE PLANS SHOULD BE COMPREHENSIVE.

Detailed distribution system needs can and should be identified in the DRPs. Such needs should include operating and capital needs. Operating needs may involve power supply, voltage support or reactive power needs, and distribution feeder operations, etc. Capital needs likely involve needs for more capacity in the form of re-conductoring, new equipment planning, etc. The need for these services (based on planning expectations and assumptions) can and should be detailed. In turn, this information and data can be made available to inform compensation structures for DERs engaged in customer distribution service, potentially in conjunction with serving on-site customer needs.

VII. DISTRIBUTED RESOURCE PLAN SHOULD INCLUDE POTENTIAL END-STATE BUSINESS MODEL FRAMEWORKS FOR MANAGING DISTRIBUTION SYSTEM POLICIES AND OPERATIONS.

Awareness of the end-goals may inform how DRPs are leveraged and developed. Such an end-state may not be achieved immediately but could be planned for and worked towards

across an appropriate time-period. CESA believes this work will require significant time and will require extensive Commission and stakeholder input. Such work will also inform other ongoing proceedings such as the IDSR proceeding. Accordingly, this work should start soon and be a major Commission priority.

VIII. DEMONSTRATIONS SHOULD ALSO FOCUS ON CONTRACTING MECHANISMS AND SHOULD HAVE RAPID TIMELINES.

CESA expects the Commission, the utilities, and stakeholders will all face some areas of learning as DRP work continues. CESA believes much of this learning can occur *in situ* and should not unduly delay progress towards smarter and more advanced distribution planning based on the ideas promoted in the DRP Proceeding. CESA recommends that pilots or demonstrations have short and fast timelines and not become a problematic critical path barrier to further progress on the DRPs. One demonstration that can speed and ready the distribution system for more DER solutions is contracting demonstrations. Such demonstrations will inform best practices and contract or tariff designs, and build experience among stakeholders.

IX. CONCLUSION

CESA thanks the Commission for the opportunity to provide this response to the Applications.

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